



CITY OF MILPITAS AGENDA REPORT (AR)

Item Title:	Receive a Staff Report on Railroad Quiet Zone Process and Provide Direction to Staff
Category:	Community Services and Sustainable Infrastructure
Meeting Date:	11/17/2020
Staff Contact:	Steve Erickson, 408-586-3301
Recommendation:	Receive staff report on Railroad Quiet Zone process and provide direction to staff.

Background:

During the August 4, 2020 City Council meeting, the Vice Mayor mentioned the City of San Jose's effort to establish railroad quiet zones and asked for a status on this effort in Milpitas since it was on the Council's list of agenda items. Direction at the meeting was for the Vice Mayor and the City Manager to research and track the issue before returning to the City Council for discussion.

Railroads are regulated under the Federal Railroad Administration (FRA), and the requirement for use of horns is regulated under Train Horn Rule (49 CFR Part 222), where locomotive engineers must begin to sound train horns at least 15 seconds in advance of all public grade railroad crossings. Train horns must be sounded in a standardized pattern to warn the public of an approaching locomotive that can require up to a mile to come to a stop once brakes are applied. The maximum volume level for the train horn is 110 decibels and the minimum sound level is 96 decibels. In comparison, normal human conversation is approximately 60 decibels and a lawn mower are approximately 90 decibels.

Under the requirements of the FRA, there is an ability for communities to establish a Railroad Quiet Zone where the use of train horns is limited or not required. A railroad quiet zone is defined as a section of rail line at least one-half mile in length that contains one or more consecutive public grade crossings or a single public grade crossing at which locomotive horns are not routinely sounded. Federal guidelines require local governments interested in establishing a quiet zone to work with the railroad, state transportation authority, and the California Public Utility Commission (CPUC) to assess the risk of locomotive-motor vehicle collisions at each grade crossing where a quiet zone is sought. Communities seeking to establish quiet zones are required to finance all necessary street and rail crossing safety improvements.

There are two types of Quiet Zones that may be established, a Partial-Day (10 pm to 7 am) or an All-Day Quiet Zone. The requirements to establish either type of quiet zone are the same, however the railroad and CPUC maybe more amendable to permit a partial-day quiet zone due to lower nighttime traffic volumes. For establishment of a quiet zone, the following criteria and requirements are to be evaluated by the community:

- a. Supplemental Safety Measures (SSM) are to be installed at every public highway-rail grade crossing within the Railroad Quiet Zone. These could include one or more of the following:
 - 1 - Temporary or permanent closure of the highway-rail crossing
 - 2 - Grade Separation of the highway-rail crossing
 - 3 – Installation of four-quadrant crossing gates, street medians, traffic channelizer devices, vehicle presence detection
 - 4 – Conversion of the street to One-Way with Crossing Gates
- b. The Quiet Zone Risk Index (QZRI) has been calculated and is already at or below the Nationwide Significant Risk Threshold (NSRT) without implementation of SSMs.

- c. Sufficient installations of SSMs to reduce the Quiet Zone Risk Index (QZRI) to a level at or below the Nationwide Significant Risk Threshold (NSRT).
- d. Sufficient installations of SSMs to reduce the Quiet Zone Risk Index (QZRI) to a level at or below the Risk Index with Horns (RIWH)

City of San Jose Quiet Zone Study

In July 2020, the City of San Jose completed a railroad quiet zone feasibility study evaluating 14 rail crossings within San Jose to determine if they can satisfy the requirements to establish a Railroad Quiet Zone. The study determined the Quiet Zone Risk index (QZRI) for the corridor within San Jose to be just below the Nationwide Significant Risk Threshold (NSRT), which meets the criteria to establish a partial Railroad Quiet Zone during the nighttime between 10PM to 7AM. However, the study warns that establishment of Railroad Quiet Zones may not be permanent and can revert as traffic volumes increase within the corridor. The study also recommend San Jose install significant and costly rail crossing improvements at the various crossings.

San Jose began the process to establish partial Railroad Quiet Zones from 10PM to 7AM at all 14 rail crossings. Their process and timeline are as follows:

- July: Submitted "Notice of Intent" to the Federal Railroad Administration (FRA), California Public Utilities Commission (CPUC), Union Pacific Railroad (UPRR), and Caltrans
- July - September: Anticipate receiving comments from stakeholders during a 60-day comment period
- October: If comments from CPUC and UPRR are addressed without requiring additional actions, a "Notice of Establishment" stating the date on which the Partial Quiet Zone will start will be issued
- The Partial Quiet Zone can start a minimum of 21 days after issuance of the Notice of Establishment

San Jose also desires to curtail the use of train horns along the rail corridor as a result of trespassing and homeless activity where train operators must regularly sound the horn to warn people observed within the rail corridor illegally. The City of San Jose and UPRR are developing a Memorandum of Understanding (MOU) to allow San Jose PD to perform law enforcement activities within UPRR’S right of way.

Analysis:

The City of Milpitas has 11 at-grade railroad crossings where the City has roadway easements from UPRR which owns and operates the rail facilities at the following locations:

1. Dixon Landing Road (Segment 1)
2. Railroad Avenue (Segment 1)
3. Curtis Avenue (Segment 1)
4. Great Mall Drive (Segment 1) (Private Drive)
5. Great Mall Parkway (Segment 1)
6. Montague Expressway (Segment 1) (County owned expressway)
7. Piper Drive (Segment 2)
8. South Milpitas Boulevard (Segment 2)
9. Ames Avenue west of Penitencia Creek (Segment 2)
10. Ames Avenue east of Penitencia Creek (Segment 2)
11. Yosemite Avenue (Segment 2)

Staff reviewed the Federal Railroad Administration’s public database for gated railroad crossings to estimate the Quiet Zone Risk Index (QZRI) for each crossing:

1.	Dixon Landing Road (Segment 1)	17,252.23
2.	Railroad Avenue (Segment 1)	28,120.84
3.	Curtis Avenue (Segment 1)	14,911.74
4.	Great Mall Drive (Segment 1)	20,250.53
5.	Great Mall Parkway (Segment 1)	31,593.35
6.	Montague Expressway (Segment 1)	48,107.38
7.	Piper Drive (Segment 2)	1,499.02

8.	South Milpitas Boulevard (Segment 2)	Score Not Available, <u>currently not gated*</u>
9.	Ames Avenue west of Penitencia Creek (Segment 2)	Score Not Available, <u>currently not gated*</u>
10.	Ames Avenue east of Penitencia Creek (Segment 2)	Score Not Available, <u>currently not gated*</u>
11.	Yosemite Avenue (Segment 2)	Score Not Available, <u>currently not gated*</u>

*Crossings without gates do not qualify for Railroad Quiet Zone and calculation cannot be performed.

These risk index numbers listed above for each crossing were compared with the National Significant Risk Threshold number (NSRT) of 13,811 to determine if each crossing location would meet the requirement to establish a Quiet Zone. The requirement is the risk number at each crossing must be at or below the NSRT number of 13,811. The risk index numbers for 10 of the 11 crossing are above the national threshold. Without crossing improvements, the crossings within Milpitas do not qualify for establishment of a quiet zone.

- Segment 1 from Dixon Landing Road to Montague Expressway has an average QZRI of 26,706.01, which is greater than the threshold of 13,811. Therefore, this segment does not qualify for a Quiet Zone without crossing improvement.
- Segment 2 from South Milpitas Boulevard to Yosemite Drive does not have crossing gates so this segment does not qualify for a Quiet Zone without crossing improvement.
- Piper Drive crossing has an index that is below QZRI. However, this crossing alone cannot establish a quiet zone because the minimum ½ mile quiet zone distance encompasses other crossing that does not meet the quiet zone requirement.

The estimated average cost to fund installation of rail crossing Supplemental Safety Measures is \$2.4 million to \$4.1 million per crossing as discussed in the San Jose feasibility study. Installation of safety measures at each of the 10 crossings in Milpitas to reduce the risk safety number would be required for the crossings to be considered for establishment of a quiet zone. The City would be required to fund the crossing improvements, and the estimated cost to improve all 10 rail crossings in Milpitas is between \$24 million and \$41 million.

Staff researched state and federal grant opportunities that could be used to help offset the high cost of crossing improvements which may help in the establishment of quiet zones. While there are no grants specifically available for the establishment of quiet zones, there are grants available for the construction of rail crossing safety improvements. The Federal Railway-Highway Crossing (Section 130) Program does provide funds for the elimination of hazards at railway-highway crossings. There are high demands for the funding and limited State and County funding opportunities. Grant funding is usually reserved for high speed, high risk crossings or for locations where a roadway closure may be a component of the overall improvement. Staff is also reaching out to the Valley Transportation Authority and the Metropolitan Transportation Authority to gauge their interest in partnering with the City to fund crossing improvements.

Staff briefed the Vice Mayor on the rail quiet zone subject on September 25, 2020, and it was requested this item be brought to the full City Council for discussion.

The funding of a new Capital Improvement Program project would be required if Council direction was for staff to move forward with a plan and feasibility study for implementation of quiet zones within Milpitas. Staff anticipates the study would focus on 6 main rail crossings between Dixon Landing Road and Montague Expressway, where train traffic is more frequent to determine the extent, cost, and feasibility of quiet zone establishment at these crossings. The following are the 6 rail crossings that could be studied:

1. Dixon Landing Road (Segment 1)
2. Railroad Avenue (Segment 1)
3. Curtis Avenue (Segment 1)
4. Great Mall Drive (Segment 1)
5. Great Mall Parkway (Segment 1)
6. Montague Expressway (Segment 1)

Staff also contacted the engineering firm that prepared the San Jose Quiet Zone Feasibility Study, JMA Civil, Inc., to estimate the cost of such a feasibility study for Milpitas. The cost is estimated to be within the \$300,000 range due to the required data collection, engineering services, and field meetings with Union Pacific Railroad where their time would be charged. The following is a breakdown of feasibility study cost:

Administration	\$50K
Consultant engineering services	\$100K
UPRR consultation services	\$100K
Traffic data collection	\$50K
<u>Total</u>	<u>\$300K</u>

Fiscal Impact:

None at this time. However, if Council direction is for staff to proceed with a new project to study the establishment of quiet zones, initial project funding would require a \$300,000 budget appropriation from the General Government CIP Fund into a new Capital Improvement Project.

It is important to note that in response to the fiscal downturn caused by the Pandemic, the Council approved the deferral of various capital projects to increase the fund balance in the General Government CIP Fund by \$4.1 million. The intent of this fiscal strategy was to have sufficient funds available for unknown future urgent capital project improvements to address health and safety issues or to return a portion of the fund balance to the General Fund to address General Fund shortfalls.

California Environmental Quality Act:

None

Recommendation:

Receive a staff report on Railroad Quiet Zone Process and provide direction to staff.

Attachments:

- 1) San Jose Quiet Zone Study
- 2) Milpitas Rail Crossing Map